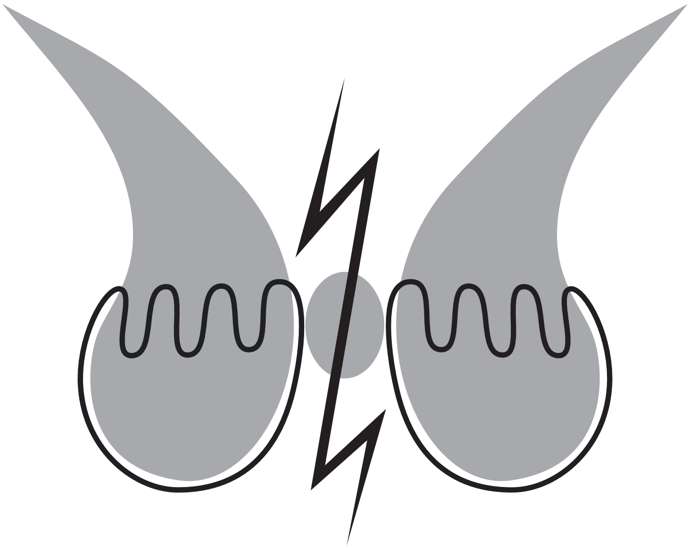
Royal Australian Navy
Radio Mechanics



THE HORMs
1942 - 1945

A History of the World War 2 Wireless and Radar Mechanics

George Stevens

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Author's Preface

In 1991 I felt it would be appropriate to write a history of the RAN Radio Mechanics who were recruited in the immediate post war period late 1945 through mid 1947. The research necessitated me making personal contact with many whom I had not seen for over 40 years. The outcome of completing and publishing the history was a strong move to hold a reunion, which did occur at what was HMAS "Torrens" at Birkenhead near Adelaide in November 1992. This was successful and led to the formation of the RAN Radio Mechanics Association in 1993.

Since 1992 there have been biennial reunions – Sydney 1994, Canberra 1996, Melbourne 1998, Nowra 2000, Perth 2002, and Caloundra 2004. Over these years the membership has been swelled from the ranks of those who joined the service after 1947 and who were trained at HMAS Cerberus. As well, some known as HOs, (Hostilities Only) who underwent their basic training in the early 1940s at the Melbourne Technical College, later RMIT, have joined our association, bringing the present membership in 2005 to over 550.

For the 1994 reunion, a booklet outlining the history of HMAS "Watson", at Sydney's South Head, was produced. This added to our little store of recorded history, because "Watson" was where the advanced technical training was carried out. At that 1994 reunion I persuaded a colleague, PRH (Lofty) Watson, to create a history of the development of radar in the RAN. Lofty did an astonishing amount of research, and for our 1998 reunion, released his excellent book "It's Nothing To Do With Me, I'm Radar". So, we then had a third chronicle of our recorded history.

In thinking about all this while planning to attend the 2004 reunion, it suddenly hit me that there was, as yet, nothing recorded about the HOs. These were the men who were recruited into the RAN late 1941 through 1945, and who struggled to come to grips with the knowledge explosion of complex electronic circuitry surrounding the various radar equipment types variously known as 281 and 960 Air Warning, Sugar George and 293 Navigation , 282 and 285 Gunnery Control, and others.

HMAS Watson, the "Fibro" Frigate, taken in 1942 looking westwards towards Sydney Harbour.

As well, there were other devices such as LORAN, a long range radio (not radar) navigation system, IFF or Identification Friend and Foe, Type X a cryptographic machine, High Frequency and Very High Frequency Direction Finding (HF & VHF DF), and the Radio Compass. To add to this seemingly never ending list of equipment to be studied and understood, there was also the range of W/T, Wireless Telegraphy transmitters and receivers for radio morse and voice communication.

The surviving members of this group of war time technicians are, in the year 2005, mostly over 80 years of age. The oldest at the time of writing this preface is 93. It is inevitable that their remaining time with us is short. Therefore now is the time to capture some of the personal history of these men, hence, this history of the RAN's World War 2 Radio Mechanics.

Despite all the considerable research which has been done to create this HO history, it is inevitable that there will be omissions and errors. One reason is that if all the available material had been included, this history would have run to volumes – an impractical outcome. Another reason is that digging into human memories that are 60 years old is a not entirely accurate process. This has been illustrated many times over in the arguments about class numbers, and for this reason class numbers have been omitted from the master list of names as being quite unreliable.

Further to this, researching into official documents names by which individuals were known, has proved frequently to be misleading. Here are a few examples. "Clarrie" Dietmanm (Clarence Charles), "Otto" Kruger (Alan Rex), "Tony" Dinham (Charles Anthony), "Phil" Thomas (Wesley Phillips), "Bill" Boswell (Robert William), Stan Powell was in fact Ernest Stanley Powell, not Stanley Alfred Powell, this latter being a Joiner III.

Nevertheless, I feel that what follows in this recorded history is for the most part true and as accurate as I could achieve.

George Stevens
Berowra Heights, June 2005.

Introduction

In September 1939, Australia followed Britain and declared war on Germany. At that time, the impending hostilities were half a world away, and posed little threat to Australia. In December 1941 when the Japanese launched their assaults on nations bordering the Pacific Ocean, matters changed dramatically. Instead of being an aggressor in a conflict 12,000 miles away, Australians were faced with the task of defending their domain from attack by a powerful, fiercely aggressive, determined and very close invader.

John Gloury when Instructor Lt Commander. John Gloury "Father" of the RAN Radio Mechanics personally interviewed and selected many of the RM trainees, and monitored their progress. He was a much respected man.

The challenge to 12,000,000 Australians of defending their vast land area encompassed by about 4,000 miles of coast line, equipped with meagre and largely outdated defence technology was daunting. To meet the challenge, many initiatives such as accelerated recruitment into the three armed services and mobilisation of industry to support a war effort were implemented. In the total context of this scenario, one of the many initiatives was the creation of a new branch of the Royal Australian Navy, the Wireless Mechanic branch.

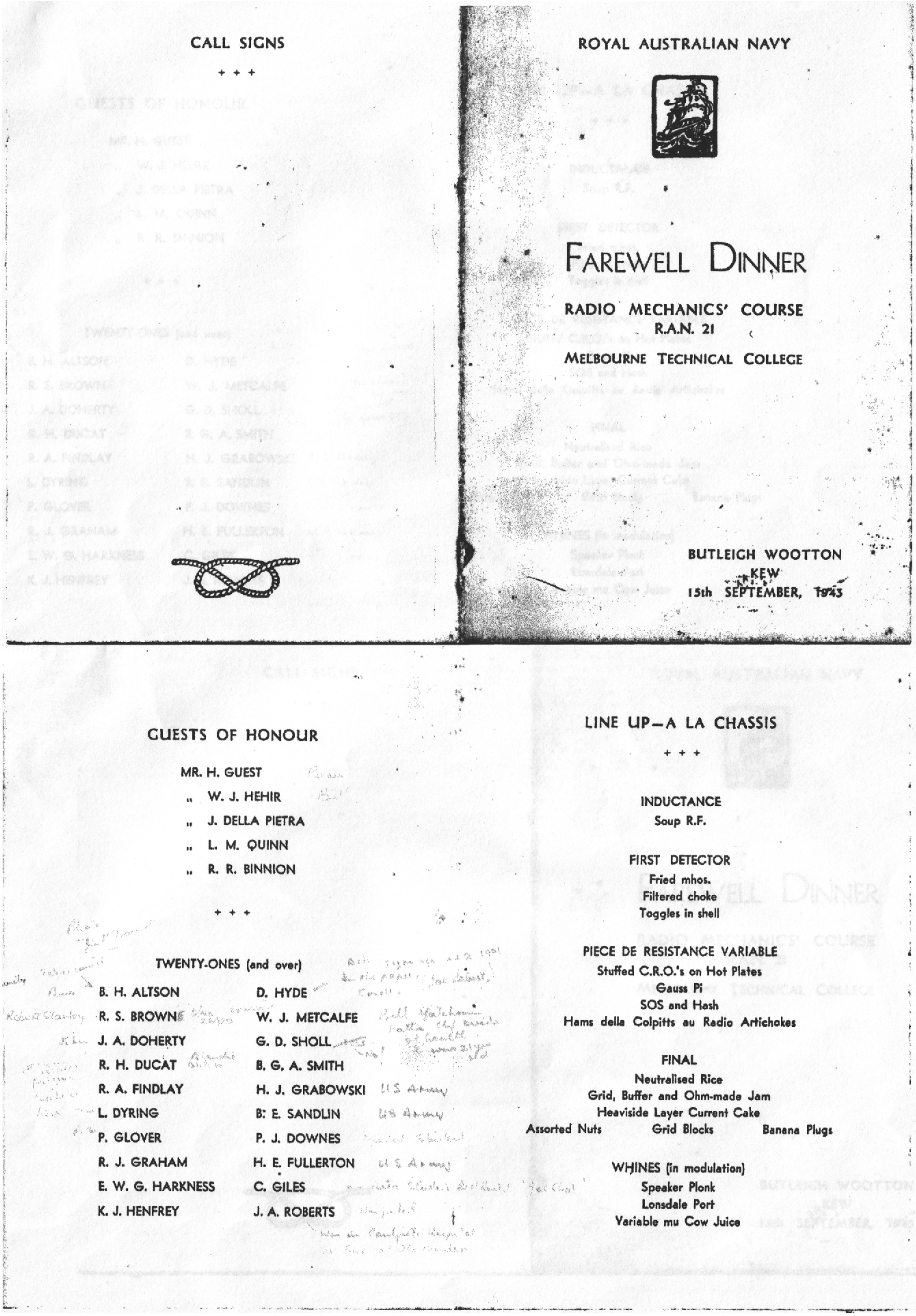
Traditionally and for organisational purposes, the Navy had branches of Engineering, Gunnery, Navigation, Communications, Supply, Electrical and Medical. Within the Communications branch there were the visual signallers, colloquially called the "bunting tossers", and the Teleraphists, aka "sparkers". The Telegraphist's main role was to operate the wireless telegraphy equipment communicating by Morse Code. Their subsidiary role was to maintain the equipment, which in the immediate pre war days, was fairly simple.

In the early 1940s, the Telegraphists quickly found that the demands on their time and skills to handle the substantial increase in wireless traffic, as well as to man and to implement a training program to meet the needs of the sudden big increase in recruits was becoming more difficult as each month passed. Coupled with this, there was a steadily increasing introduction of more technologically complex electronic equipment to the ships and shore establishments. It soon became clear that the maintenance role of the Telegraphist could not continue. To address this need, the new title of Wireless Mechanic was conceived late in 1941, and introduced to the RAN early in 1942 (CNO194/42 refers).

In order to turn this concept into reality, selected personnel were to be given a basic training course of 6 months duration at the Melbourne Technical College, later known as the Royal Melbourne Institute of Technology (RMIT). This basic training was followed by equipment training at the RAN shore establishments of HMAS Rushcutter and HMAS Watson in Sydney, and at HMAS Harman and the Belconnen Transmitting station, both in Canberra. A few of the selected personnel came from existing Naval ranks, but the majority were recruited from civilian life. These then became what we know today as the Hostilities Only Radio Mechanics (HO RMs).

Radio Direction Finding (RDF) was the name given initially to the very new and top secret device which could "see" targets over the horizon, and at night, by showing on special equipment the range in yards, and bearing relative to the ship's head or to the compass. As well, for detecting aircraft, it could show the angle of elevation necessary for training the anti aircraft guns. Various models of this technology were developed, and it logically fell to the Wireless Machanic to instal and to maintain it. The title RDF was soon changed to that of RADAR, an acronym of Radio Direction and Ranging. As the title Wireless Mechanic was then no longer completely descriptive, the maintainers' title was changed to Radio Mechanic. The Radio Mechanic then became responsible for the satisfactory performance of all electronic equipment in his ship. This was quite a responsible task. This change occurred in 1943 (CNO 414/43 refers).

In a history such as this, technical references are essential. However, the thrust and focus of the book is on the people. It is a record of what life was like for those men, most of whom, upon joining the RAN, had not the faintest idea of what the word Radar meant, nor how radio communication occurred, yet within the space of 12 months intensive training, had the responsibility of keeping all of a warship's radar



CALL SIGNS

+ + +

ROYAL AUSTRALIAN NAVY

FAREWELL DINNER

RADIO MECHANICS' COURSE
R.A.N. 21
MELBOURNE TECHNICAL COLLEGE

BUTLEIGH WOOTTON
KEW
15th SEPTEMBER, 1943

GUESTS OF HONOUR

MR. H. GUEST
„ W. J. HEHIR
„ J. DELLA PIETRA
„ L. M. QUINN
„ R. R. BINNION

+ + +

TWENTY-ONES (and over)

- B. H. ALTSON
- R. S. BROWNE (Robert Stanley)
- J. A. DOHERTY
- R. H. DUCAT (Blanche)
- R. A. FINDLAY
- L. DYRING
- P. GLOVER
- R. J. GRAHAM
- E. W. G. HARKNESS
- K. J. HENFREY
- D. HYDE
- W. J. METCALFE
- G. D. SHOLL
- B. G. A. SMITH
- H. J. GRABOWSKI U S Army
- B. E. SANDLIN US Army
- P. J. DOWNES Medical Student
- H. E. FULLERTON U S Army
- C. GILES
- J. A. ROBERTS

LINE UP—A LA CHASSIS

+ + +

INDUCTANCE
Soup R.F.

FIRST DETECTOR
Fried mhos.
Filtered choke
Toggles in shell

PIECE DE RESISTANCE VARIABLE
Stuffed C.R.O.'s on Hot Plates
Gauss Pi
SOS and Hash
Hams della Colpitts au Radio Artichokes

FINAL
Neutralised Rice
Grid, Buffer and Ohm-made Jam
Heaviside Layer Current Cake
Assorted Nuts — Grid Blocks — Banana Plugs

WHINES (in modulation)
Speaker Plonk
Lonsdale Port
Variable mu Cow Juice

Chapter 8 - Glossary of Terms

Glossary of Terms, Expressions, Place Names and Jargon Used in This Book

(S)	As an example, a PO RM (S) specialsed in W/T equipment in shore stations.
(W)	As an example, a PO RM (W) had training in both W/T and Radar equipment
AFO	Admiralty Fleet Order. Orders passed to the Royal Navy
AWL or AwoL	Absent Without Leave, ie unauthorised absense
BB	Bailey Boy. Specialist Radar officer trained by Professor Bailey, University of Sydney
CAFO	Confidential AFO. Confidential orders passed to selected recipients in the Royal Navy
Capt(L)	Captain with Electrical specialisation
CCNO	Confidential CNO. Confidential orders passed to selected recipients in the Royal Australian Navy.
CElO	Commissioned Electrical Officer. A rank to which non commissioned electrical ranks, eg PO RM may be promoted
ChRE	Chief Radio Electrician. Later title of Chief Radio Mechanic
CNO	Commonwealth Navy Order. The document, numbered sequential and by year, to communicate to the RAN
Corvette	Bathurst class escort vessel and mine sweeper. The RAN had 56 of these in service.
CW	Continuous Wave. A basic form of radio transmission
Davit	The mechanical device fixed to a ship's side for the purpose of lowering a boat into the sea
Dhobey	Laundry
Dicky front	A mock shirt worn by some sailors to accentuate a manly chest.
Dog Watches	1600 to 1800 hours was the first dog watch, 1800 to 2000 was the second dog watch (See Watches)
El Cdr	Electrical Commander
Fibro Frigate	Colloquialism for HMAS Watson, the technical training establishment at North Head Sydney
Foreigners	Items illegally acquired or manufactured using Navy materials and/or equipment (see rabbits)
GC stripe	Good conduct stripe. One for each of 3, 8 and 12 years of good conduct service. Worn on the left arm
Hard tack	Emergency rations, typically buscuits, tinned meat

HDML	Harbour Defence Motor Launch, typically about 70 feet long. Seagoing MLs were about 120 feet long
H.O.	Hostilities Only. That is for the duration of WW2 plus 6 months.
Inst Cdr	Instructor Commander
Jump ship	Desert.
Left arm rank	Symbol to denote rank. Eg anchor for Leading rate, crossed anchors with crown for Petty Officer
LRM	Leading Radio Mechanic
Lt(SP)	Lieutenant (Special purpose). For example RDF, Cryptography.
Make & Mend	Free time. Historically time for sailors to make and mend their uniforms
MCW	Modulated Continuous Wave. A modified form of radio transmission
Meals	Breakfast usually 0700. Dinner 1200. Tea 1600. Supper 1800.
Native	Home locality. Thus a native of Perth is from Perth
Ohmeter	An instrument for measuring electrical direct current resistance. Generally adapted to measure voltage and current also.
Pick	Anchor
Pipe	Announcement eg pipe “Hands to supper” means time for the evening meal
PORM	Petty Officer Radio Mechanic
Port Wing	Left hand side of a ship’s bridge
PTI	Physical Training Instructor
Pusser	Corruption of purser. Describes anything authorised or correct. See Tiddley
PWO	Port Wireless Officer
R.A.N.R.	Royal Australian Naval Reserve
RANVR	Royal Australian Navy Volunteer Reserve
R/T	Radio Telephony
Rabbits	Souvenirs. Some acquired legitimately by price haggling with vendors. Some acquired by other methods
RADAR	**RA**dio **D**irection **A**nd **R**anging. An electronic device measuring the range, relative bearing and elevation of distant objects
RDF	Radio Direction Finding. Original name given to Radar
RE	Radio Electrician. Title which replaced PO RM
Refit	Periodically a ship requires dockyard maintenance – boilers, heavy machinery, rigging etc
Right arm rate	Symbol to denote occupation. Eg crossed

	flags for visual signaller, crossed cannons for gunner
Round rig	Junior sailors’ uniform – round cap, bell bottom trousers. (See square rig)
S/Lt	Sub Lieutenant
Ship’s Company	The ship’s complement of all personnel
Ships in Reserve	A ship or group of ships “mothballed” such that with limited time and effort could be recommissioned quickly
Ship’s pilot	Merchant Navy officer specially trained to navigate foreign ships in and out of ports
Square bashing	Learning to march, counter march, salute etc.
Square rig.	Uniform worn by Petty Officers, and others such as Stewards, Writers. Typically three button jacket, white shirt, black tie
SSB	Single Side Band. A modified form of radio transmission
Star shell	Special explosive fired at night to burst at about 1000 feet and illuminate the surrounds
S/Torpedoman	Seaman torpedoman
Swattie	Navy jargon for a soldier
Tiddley	Describes anything unauthorised . See pusser.
Tot	For years, the Royal Navy issued a “tot” of rum daily to all non commissioned personnel. Not so in the RAN
Vibrator	A little device operated usually from 12 volts DC producing 50 cycle pulses for conversion to 230 volts AC
Wardroom	Officers’ mess
Watches	Middle watch, midnight to 0400. Morning watch 0400 to 0800. Forenoon watch 0800 to noon. Afternoon watch noon to 1600. First dog watch 1600 to 1800. Second dog watch 1800 to 2000. First watch 2000 to midnight.
WM	Wireless Mechanic. Earlier title of Radio Mechanic
WMQ	Wireless Mechanic Qualifying

Acknowledgments

There are many people who have contributed time and material to the creation of this book. Some have done a lot, some have done a little, and collectively the whole has been a remarkable exploration into the past, resulting in a very satisfying outcome.

The men who provided the cameos, those who provided historical data, photographs and service documents are some. The staff of National Archives of Australia, Canberra, gave very valuable support photocopying some 1,600 historic documents. The Department of Veterans' Affairs web site, www.ww2roll.gov.au yielded much historical fact. The staff of the Grants Office of the Department of Veterans' Affairs have treated my application for financial assistance with consideration.

There are however, three who must be mentioned by name. One is Shirley Stevens, without whose infinite patience, forbearance and tolerance (to say nothing of the regular cups of fortifying tea) this publication might have remained in draft form for the next decade. The second is my old buddy, whom I have known these past 59 years, John Saywell OAM. John has been a remarkable source of information and old photographs, all of which have added immeasurably to the interest and appeal of this history. The third is my good friend and expert publisher, Brian Engert. Brian took my accumulated muddle of texts, photos and other material, waved his magic wand, and produced this professional looking document.

The only equitable way to recognise everyone else is to record contributors' names listed alphabetically, and to hope that I do not forget anyone. Should this be the case, I offer my apologies and claim human frailty.

Baird John

Baldock Brian

Balme Basil

Corben Russell

Coyle Gwen

Crow George (Jim)

Doran Reg

Gibson Anne (Polly Woodside Museum)

Gillam Sandy (RMIT Archivist)

Gillespie Peter

Glover Peter

Gulson Tom (Neil)

Hoskins Allen

Kennedy Kevin

Labone Reg

Laughton John

Linton Bob

McDonald Reuben

McDonnell Jim

Palmer Tom

Pritchard Maurie

Ramsay Hilton (Tony)

Routh Russell

Saunders Norm

Scaife Clyde

Shackleton Ian

Slatyer Bob

Weatherall Leslie (National Archives)

West Jim

Woodward Greg